

significantly cooler than the heated substrate. However, such alleged motivation does not comply with current guidelines, and in particular with the recent decision by the Supreme Court in KSR. First, Kasai does not teach that it is desirable to heat gas entering a processing vessel *in order to prevent thermal shock* of the heated substrate. As set forth in the prior response, the heater disclosed by Kasai is to control the temperature of the processing gas to prevent condensation of the processing gas. See column 10, lines 16-18, of Kasai. However, in the preferred disclosed embodiment of Xu the processing gas is silane, and there is no problem with the silane gas condensing. Accordingly, there would be not motivation to add a heater to the apparatus of Xu.

In addition, there is no teaching, suggestion, or disclosure in Xu to indicate that there is any problem with the temperature of the processing gas entering the processing vessel, and in particular, there is no problem with thermal shock or condensation. Accordingly, since there is no disclosure of any deficiency or problems in these particular areas, one of ordinary skill in the art would not be motivated to seek a solution to a problem that doesn't exist.

As set forth in the specification of the present application, the heater is embedded in the partition plate to prevent the absorption of the cleaning gas to the surface of the partition plate. Accordingly, such reasoning is quite different than anything that might be taught or suggested by Kasai.

Therefore, Applicant submits that there is no proper motivation for modifying Xu by the teachings of Kasai in order to heat the partition plate.

The Examiner further alleges that it would be obvious to modify Xu by grounding the conductive partition to the sidewall via a conductive mount to provide

an alternate and equivalent means of grounding the conductive mount as taught by Mashima. However, such alleged motivation falls far short of the requirements for combining references. First, there is no teaching or suggestion in Xu that there is any problem or deficiency with the method of grounding therein. Accordingly, one of ordinary skill in the art would not be motivated to seek a solution to a problem that does not exist. Furthermore, Mashima does not teach grounding the conductive partition to a sidewall with a conductive mount. Mashima shows, in a schematic illustration, a broken line representing schematically that the partition plate 2 should be grounded. However, there is no teaching or suggestion of how the partition plate is grounded, and in particular, there is no teaching or suggestion of grounding the partition plate with a conductive mount.

Furthermore, there is no teaching or suggestion in any of the references that an equivalent or alternative means of grounding would be desirable for the system of Xu.

The fact that a combination may be made or that a reference may be modified is not sufficient basis for making such a modification. It is well established law that there must be some teaching or motivation to make such modification.

Accordingly, Applicant submits that the alleged motivation for modifying Xu with the teachings of Mashima is improper. Applicant further submits that even if the combination was proper, there is no teaching in Mashima that the grounding is accomplished by means of a "conductive mount".

The Examiner alleges that one of ordinary skill in the art would be motivated to use the electrically conductive spiral shield of Long to connect the vacuum vessel and the conductive partition of Xu. However, Long discloses a spiral shield

comprising an inner rubber seal encircled by a spiral conductor. The spiral shield of Long would not be able to withstand high temperatures, as is set forth in claim 1, and required by the present invention. Accordingly, there is no reason why one of ordinary skill in the art would be motivated or even tempted to use the disclosed spiral shield in Long with the system of Xu. In addition, the spiral shield disclosed by Long is not used in connection with grounding a partition plate to the wall of the chamber.

The Examiner attempts to overcome the deficiency of the Long spiral shield by alleging that Loan teaches that the spiral shield could be made of a high temperature seal. However, the teachings of Loan et al. also have nothing to do with grounding a partition plate to a chamber wall. Furthermore, in view of the fact that the Long spiral shield is totally inadequate for use in the Xu partition plate, there would be no motivation to try to figure out how to modify the Long spiral shield. Accordingly, Applicant submits that the alleged motivation for modifying Xu on the basis of Long and Loan is also insufficient.

Accordingly, Applicant submits that the combination alleged by the Examiner is deficient for at least two reasons. First, the alleged motivation for combining the references as proposed by the Examiner has been made purely in hindsight, and there is no requisite motivation or reasoning for making the alleged modifications. Secondly, even if there was motivation for combining the references, as set forth above, the combined references do not teach or suggest the present invention.

Accordingly, claim 1 is clearly patentable over the applied prior art.

Claims 3-14 are also patentable over the applied prior art for the same reasons set forth above.

With regard to the rejection set forth in paragraph 3 beginning on page 5 of the Official Action, Applicant submits that U.S. Patent No. 6,427,623 is assigned to the same assignee of the present invention, and is thus not prior art with regard to the present application under 35 U.S.C. §102. In addition, the arguments set forth above with regard to the rejection based on Xu, also applies to the rejection based on Ko.

With regard to the rejection set forth in paragraph 4 beginning on page 8 of the Official Action, Applicant submits that the Tanaka et al. Patent Publication is also not prior art with respect to the present application. Accordingly, that rejection should also be withdrawn. In addition, the arguments set forth above with respect to the rejection in paragraph 2 are also applicable to this rejection. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection set forth in paragraph 4 of the Official Action.

With regard to the rejection set forth in paragraph 5 beginning on page 11 of the Official Action, Applicant submits the rejection is improper at least for the reasons set forth above with respect to the rejection set forth in paragraph 2 of the Official Action.


Accordingly, in view of the foregoing remarks, the Examiner is respectfully requested to reconsider and withdraw the outstanding rejections. With regard to the double patenting rejections, such rejections could be overcome by a terminal disclaimer provided that all other rejections are withdrawn.

In the even that there are any questions concerning this response, the Examiner is respectfully urged to telephone the undersigned attorney so that prosecution of the application may be expedited.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: August 7, 2007

By:   
William C. Rowland  
Registration No. 30888

P.O. Box 1404  
Alexandria, VA 22313-1404  
703 836 6620